

Attorney's Docket No.: 05542-303KX1 / 2834/PDD/CMP/RK

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Steven M. Zuniga et al.

Art Unit : 1763

Serial No. : 90/006,260

Examiner : Sylvia R. MacArthur

Filed : June 3, 1998

Title : A CARRIER HEAD WITH A MULTILAYER RETAINING RING FOR  
CHEMICAL MECHANICAL POLISHINGCommissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450DECLARATION

I, DAI DEE PUN, declare as follows:

1. I have been an employee of Applied Materials, Inc. ("Applied Materials") since August 1, 1999, and am currently a Senior Manager at Applied Materials' Applied Global Services ("AGS") Division, previously known as Customer Productivity Support ("CPS") Division.

2. Applied Materials currently sells retaining rings in three sizes. For the first size ("150mm retaining ring"), the inner diameter of the retaining ring is sized to receive and hold a 150mm diameter substrate. For the second size ("200mm retaining ring"), the inner diameter of the retaining ring is sized to receive and hold a 200mm diameter substrate. For the third size ("300mm retaining ring"), the inner diameter of the retaining ring is sized to receive and hold a 300mm diameter substrate.

3. Some retaining rings sold by Applied Materials have two portions: a lower portion to contact the polishing pad and an upper portion that is more rigid than the lower portion. These retaining rings are referred to as composite or advanced edge performance ("AEP") retaining rings.

## CERTIFICATE OF MAILING BY FIRST CLASS MAIL

I hereby certify under 37 CFR §1.8(a) that this correspondence is being deposited with the United States Postal Service as first class mail with sufficient postage on the date indicated below and is addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

December 24, 2003

Date of Deposit

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Nikia M. Mc Nillion

Typed or Printed Name of Person Signing Certificate

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4. A particular type of composite retaining ring sold by Applied Materials has a lower portion of polyphenylene sulfide ("PPS"), an upper portion of stainless steel, and an epoxy affixing the lower portion to the upper portion (these retaining rings will be termed "multi-layer retaining rings" for the purpose of this declaration).

5. Some retaining rings sold by Applied Materials are formed entirely of PPS. These retaining rings are referred to as solid PPS retaining rings.

6. Since July 1998, Applied Materials has sold a carrier head, termed the TITAN wafer carrier, for polishing 200mm wafers ("the 200mm TITAN"). Applied Materials sells 200mm multilayer retaining rings that fit the 200mm TITAN wafer carrier ("TITAN composite rings"). Applied Materials also sells 200mm solid PPS retaining rings that fit the 200mm TITAN wafer carrier ("TITAN PPS rings"). The TITAN composite rings and TITAN PPS rings fit interchangeably onto the 200mm TITAN wafer carrier.

7. Together, to date, the TITAN composite rings and TITAN PPS rings constitute more than 90% of all retaining ring sales (by number of parts sold) by Applied Materials.

8. The Applied Materials fiscal year ("FY") begins near the end of October. For example, FY 1998 began October 27, 1997, FY 1999 began October 26, 1998, FY 2000 began November 1, 1999, FY 2001 began October 30, 2000, FY 2002 began October 29, 2001, FY 2003 began October 28, 2002 and FY 2004 began October 27, 2003.

9. The following chart provides the ratio ("Price Ratio"), from FY 1998 to FY 2002, of the average price (as sold by Applied Materials) of the TITAN composite ring to the average price (as sold by Applied Materials) of the TITAN PPS rings. The chart also provides the percentage ("Composite Share"), from FY 1998 to FY 2002, of retaining rings sold by Applied Materials to fit the 200mm TITAN wafer carrier that were multilayer retaining rings.

FY	1998	1999	2000	2001	2002
Price Ratio	0.97	0.97	1.17	1.25	1.06
Composite Share	19.4%	68.3%	79.7%	69.6%	88.5%

10. As shown in the chart in paragraph 9, upon introduction, although the TITAN composite ring was only about 3% less expensive than TITAN PPS ring, by the end of FY 1998 the Composite Share had already risen to 19%, and by the end of FY 1999, the Composite Share

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was about 68%. Moreover, although from FY 2000 through FY 2002 the average price of the TITAN composite ring was actually more expensive than the average price of the TITAN PPS ring, the Composite Share nonetheless increased from about 68% to about 88%.

11. From FY 1998 to the present, Applied Materials has generated over fifty-two (52) million dollars in revenue from the sale of TITAN composite rings.

12. The only layers in the TITAN composite ring are the lower portion of polyphenylene sulfide ("PPS"), the upper portion of stainless steel, and the epoxy affixing the lower portion to the upper portion.

13. An overwhelming majority of the install base of Applied Materials polishing systems have switched over to composite retaining rings (whether sold by Applied Materials or other vendors).

14. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true. I further declare that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

12/23/03

Date

Dai Dee P.

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CERTIFICATE OF SERVICE

It is hereby certified that a copy of the foregoing documents for the DECLARATION has been served this 24th day of December, 2003, by first class mail, postage prepaid, on the third party requestor, addressed as follows:

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